Book Review

R. House, R. Layton, J. Livingston, and S. Moseley

The Engineering Communication Manual

—Reviewed by
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Index Terms*—*Engineering reports, executive summaries, preparing presentations, professional communication, technical writing.

The *Engineering Communication Manual* is ideal for engineers at all stages of their careers: from the freshman engineering student to the college professor to the CEO of a large corporation. It can be a valuable tool for universities to train undergraduate and graduate students and for companies to train their employees. It clearly accomplishes its purpose—it teaches best practices in engineering communication using real-world issues and genres.

As an assistant professor of engineering at a Land-Grant University, I know that employers want to hire people with good communication skills. After discussion among our faculty, last year our department adopted *The Engineering Communication Manual* as a communications guide for our undergraduate and graduate students. It is used as a textbook for a graduate-level communications course taught by another faculty member in our department. I use it as a training tool for graduate students in my research group.

Chapters are organized in order of issues in engineering communication development—from the writing context (planning, ethics, global differences, document design), to audiences (engineers, staff, executives, clients, the public), to genres (reports, correspondence, proposals, instructions, applications), to processes (researching, drafting, revising, collaborating), to composing elements (headings, paragraphs, sentences, words, summaries) and visuals (graphs, illustrations, slides, and posters).

The book covers the entire process of preparing professional communications from preliminary planning to the finished product. It explains how to identify your audience and their expectations, organize each kind of communication according to accepted norms, edit communications, prepare visual elements, collaborate in teams on writing projects, and much more. The sections on editing discuss both macro- and microwriting concerns —from organizing ideas to constructing grammatically correct sentences and paragraphs. There is also a section on how to find relevant research articles or patents when engaging in a technical project.

The manual explains how different audiences think, knowledge that is useful to beginning writers without experience presenting to different audiences. For example, the report written for a scientist, engineer, or technician should obviously be very different from an executive summary written for the company's president. These should also be very different from communications to clients, which should, in turn, be very different from communications to the general public. Furthermore, readers do not always read a work linearly from front to back. Readers of research articles or technical reports may read the abstract, conclusion, or summary, tables, and figures without reading the entire work. The book explains how to establish credibility and maintain a professional tone, no matter the audience.

The breadth of topics presented is amazing. The book covers many types of communications: reports in a research community (e.g., journal articles) and in an industrial organization, as well as letters, proposals, job applications, summaries,

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written instructions, usability tests, oral presentations, posters, emails, phone calls, memos, and communications using social media. Each type is illustrated using real examples with the authors' notes in the margins. You will learn a great deal from these examples. The book also explains the typical lengths for these different types of communications.

The chapters on meeting ethical obligations and understanding cultural differences are helpful introductions and useful reminders of the importance of the moral and multicultural dynamics of our field. They illustrate that effective communication is not only about what is written but also about what is conveyed to readers. It is important for writers to understand not only what they have written but also how people from entirely different backgrounds may interpret what they have written. Thus, avoiding misleading statements and not omitting key information are important. The book also explains how to properly cite sources of information, which is an important ethical consideration for proper attribution of credit.

One expects that a book on how to write should be written well, and *The Engineering Communication Manual* does not disappoint. The book's main sections are marked by appealing colors at the top of each page. The chapter title appears on the top of each left-hand page, and the section title appears on the top of each right-hand page. Each chapter is designed as an independent module. Each chapter has a motivation at the beginning, a list of objectives, clear subsections, interesting examples, and an extremely helpful summary at the end. Gray shading sets apart the examples, and green shading sets apart the chapter summaries. This color coding makes it easy for readers to instantly get their bearings. The book makes appropriate use of lists to get key information across quickly. Consequently, the book does not have to be read linearly from front to back, but you can read whichever section you desire.

Improved communication skills can greatly enhance an engineer's career. Spending just 5 minutes a day reading it will make you a better communicator. Even experienced writers will learn from this book. Companies could no doubt increase the efficiency of teamwork by using it to improve the communications in their organizations.

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